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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,336	12/01/2003	David J. Zahniser	11.015011 CON	5486

41696 7590 09/06/2006

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EXAMINER

STOCK JR, GORDON J

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/726,336

Applicant(s)

ZAHNISER ET AL.

Examiner

Gordon J. Stock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-26, 28-32 and 37-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-25, 28-32 and 37-40 is/are rejected.
- 7) ☒ Claim(s) 26, 41, and 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>20060607</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                                     |

### DETAILED ACTION

1. The Amendment received on June 12, 2006 has been entered into the record.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. **Claims 16-18, 21, 22-24** are rejected under 35 U.S.C. 102(e) as being anticipated by **Douglas-Hamilton et al. (6,445,451)**.

As for **claim 16**, Douglas-Hamilton in a colorimeter and assay device discloses the following: a light source having a first narrow band wavelength (Fig. 5: 64a; Fig. 4: LED 1 (RED)) and a second narrow band wavelength (Fig. 5: 64b; Fig. 4: LED 2 (green)); separately controllable (Fig. 4: 62; Fig 5: 62; col. 6, lines 45-50); at least one lens (Fig. 4: 71); disposed between light source and slide (cassette for slide: col. 5, lines 3-5; col. 3, lines 60-65; Fig. 4: 14).

As for **claim 17**, Douglas-Hamilton discloses everything as above (see **claim 16**). In addition, he discloses the light source comprises a red LED (Fig. 4: LED 1 (RED)).

As for **claim 18**, Douglas-Hamilton discloses everything as above (see **claim 16**). In addition, he discloses the light source comprises a green LED (Fig. 4: LED 1 (GREEN)).

As for **claim 21**, Douglas-Hamilton discloses everything as above (see **claim 16**). In addition, he discloses the light source comprises an array of LEDS including a red LED and a green LED (Fig. 4: LED 1 (RED); LED 2 (GREEN)).

As for **claim 22**, Douglas-Hamilton discloses everything as above (see **claim 16**). In addition, he discloses the light source comprises a third narrow band wavelength different from the first and second narrow band wavelengths (col. 11, line 20-22 and col. 11, lines 40-42).

As for **claims 23-24**, Douglas-Hamilton discloses everything as above (see **claim 16**). In addition, he discloses the first wavelength between 690 and 750 nm and the second wavelength between 500 and 600 nm (col. 7, lines 30-35).

#### ***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 16-25, 28, 29-32, 37** rejected under 35 U.S.C. 103(a) as being unpatentable over **Miller et al. (6,373,568)**.

As for **claim 16**, Miller in a spectral imaging system discloses the following: a light source having a first narrow band wavelength and a second narrow band wavelength different from the first narrow band wavelength (Fig. 4a: 1: Fig. 1: 10a-10j; col. 5, lines 40-52); separately controllable (Fig. 3: 42 and 43); at least one lens disposed between light source and sample (Fig.

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4a: 166 or 163). Miller does not explicitly state a slide, but he mentions a microscope assembly with biological sample (Fig. 4a: 67; col. 5, lines 1-5; col. 9, lines 15-35). Examiner takes Official Notice that slides are well-known supports for biological samples in microscopy. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have a slide to provide support for the biological sample being investigated.

As for **claims 17, 18, 21, 22**, Miller discloses everything as above (see **claim 16**). In addition, he discloses a red LED, green LED, and another LED of a different wavelength (col. 6, lines 30-35).

As for **claims 19, 20, 25**, Miller discloses everything as above (see **claim 16**). In addition, he discloses an array of at least 2 green LEDs, second narrow band wavelength, and an array of at least 2 red LEDs, first narrow band wavelength, from having a central wavelength spaced 25 nm apart with a bandwidth overlapping between at least two neighboring LEDs from having a bandwidth of about 35nm (col. 5, lines 42-50).

As for **claims 23-24**, Miller discloses everything as above (see **claim 16**). In addition, he discloses a first wavelength between about 690 and about 750 nm (col. 6, line 32; col. 14, lines 35-40); and a second wavelength between about 500 and 600 nm (col. 5, lines 42-50; col. 6, line 15 and line 32).

As for **claim 28**, Miller discloses everything as above (see **claim 25**). In addition, he discloses the first and second LED arrays are formed on a single substrate (Fig. 2: 10a-10j constituting 10 dies on one substrate).

As for **claim 29**, Miller discloses the following: a substrate (Fig. 2: 10a-10j constituting 10 dies on one substrate); a first narrow band wavelength LED consisting of a first die attached

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to the substrate (Fig. 2: 10a); a second narrow band wavelength LED consisting of a second die, the second die attached to the substrate, the first narrowband wavelength different from the second narrowband wavelength (Fig. 2: 10b-10j); a plurality of lenses including a first lens positioned over the first die, and a second lens positioned over the second die (Fig. 1: 11a-11j).

As for **claims 30 and 31**, Miller discloses everything as above (see **claim 29**). In addition, he discloses an array of at least 2 green LEDs and an array of at least 2 red LEDs from having a central wavelength spaced 25 nm apart with a bandwidth overlapping between at least two neighboring LEDs from having a bandwidth of about 35nm (col. 5, lines 42-50).

As for **claim 32**, Miller discloses everything as above (see **claim 29**). In addition, he discloses at least one red LED and at least one green LED (col. 6, lines 30-35).

As for **claim 37**, Miller discloses the following: a first array of two LEDs having a first narrowband wavelength; a second array of two LEDs having a second narrowband wavelength different from the first narrowband wavelength; a third array of two LEDs having a third narrowband wavelength different from the first and second narrowband wavelength from having a central wavelength spaced 25 nm apart with a bandwidth overlapping between at least two neighboring LEDs from having a bandwidth of about 35nm (col. 5, lines 42-50); formed on a single substrate (Fig. 2: 10a-10j constituting 10 dies on one substrate); at least one lens disposed between the sample and the respective first, second, and third LED arrays (Fig. 1: 11a-11j and 15; Fig. 4a: 166 and 163). Miller does not explicitly state a slide, but he mentions a microscope assembly with biological sample (Fig. 4a: 67; col. 5, lines 1-5; col. 9, lines 15-35). Examiner takes Official Notice that slides are well-known supports for biological samples in microscopy.

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have a slide to provide support for the biological sample being investigated.

6. **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Miller et al. (6,373,568)** in view of **Nakasato (5,262,891)**.

As for **claim 38**, Miller discloses everything as above (see claim 16). He does not explicitly state at least one lens comprises a Koehler illuminator but suggests it (Fig. 1: 15; Fig. 4a: 166). Nakasato in a microscope system teaches that Koehler illumination provides uniform illumination of a sample (col. 1, lines 10-30). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made that Miller's microscope of Fig. 4a has a Koehler illuminating lens in order to provide uniform illumination across the sample.

7. **Claims 39-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Miller et al. (6,373,568)** in view of **Wunderman et al. (6,122,042)**—previously cited.

As for **claim 39**, Miller discloses everything as above (see **claim 16**). He does not explicitly state a microchip module, but suggests one (Fig. 2: 10a-10j). However, Wunderman in a photometric device discloses a microchip module for an LED array (Fig. 6a). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the light source comprise an LED microchip module to have a more compact illumination system.

As for **claim 40**, Miller in view of Wunderman discloses everything as above (see **claim 39**). In addition, Miller demonstrates a substrate (Fig. 2: 10a-10j having a substrate and 10 dies); an array of LEDs (Fig. 2: 10a-10j); the array including two red LEDs and two green LEDs from having a central wavelength spaced 25 nm apart with a bandwidth overlapping between at

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least two neighboring LEDs from having a bandwidth of about 35nm (col. 5, lines 42-50); the LEDs attached to the substrate (Fig. 2: 10a-10j having a substrate and 10 dies); a plurality of lenses including a first lens positioned over at least one red LED, and a second lens positioned over at least one green LED (Fig. 1: 11a-11j).

### *Response to Arguments*

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### *Allowable Subject Matter*

9. **Claims 26, 41, and 42** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to **claim 26**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an optical instrument lighting system the first array of LEDs are formed on a first substrate and the second array of LEDs are formed on a second substrate, in combination with the rest of the limitations of **claim 26**.

As to **claims 41-42**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an optical instrument lighting system the first and second lenses are attached to the potting material, in combination with the rest of the limitations of **claims 41-42**.

### *Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent 6,121,053 to Kolber et al. (specifically, Fig. 2: 100 and 200)

U.S. Patent 6,160,618 to Garner (specifically, Fig. 2: 12a-12c).



U.S. Patent 6,369,893 to Christel et al. (specifically, Fig. 13: 100 and 104)

11. Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made by the Board of Patent Appeals and Interferences. *In re Selmi*, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); *In re Fischer*, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well known statement was made.

#### *Fax/Telephone Numbers*

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

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*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (571) 273-8300*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431.

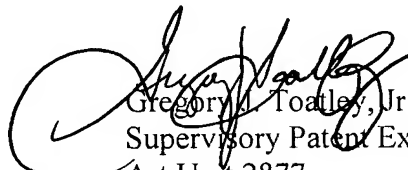
The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gs

August 31, 2006

  
Gregory J. Toatley, Jr.  
Supervisory Patent Examiner  
Art Unit 2877  
5 Sept 06